

### **Abstract**

Food insecurity in many low-income, developing countries is projected to intensify unless steps are taken to reverse the performance trend of key contributing factors: agricultural productivity, foreign exchange earnings, and population growth. For the poorest countries, an increase in agricultural productivity is the key to improving food security. In these countries, imports play a small role in the domestic food supply because of limited foreign exchange availability. This study evaluates availability and distribution of food and analyzes their trends through 2008 by projecting food gaps to maintain per capita consumption, meet nutritional needs, and fulfill requirements stemming from unequal food distribution.

**Keywords:** Food security, developing countries, productivity, foreign exchange availability, import capacity, income distribution, population growth, nutritional requirements, per capita consumption.

### **Acknowledgments**

Appreciation is extended to Kitty Smith and Nicole Ballenger for their support of the food security project. The authors gratefully acknowledge the reviews of David Atwood, Carl Mabbs-Zeno, Mark Rosegrant, and Mary Bohman. The authors wish to thank Birgit Meade for her superior efforts on tables and charts. Special thanks go to Carrie Ingoglia and Thomas McDonald, our technical editors, Wynnice Pointer-Napper and Anne Pearl, our graphics designers.

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## Summary

Food insecurity in many low-income, developing countries is projected to intensify unless steps are taken to reverse the performance trend of key factors. Agricultural productivity, foreign exchange earnings, and population growth all influence a country's food security. For the poorest countries, an increase in agricultural productivity is the key to improving food security. In these countries, imports play a small role in the domestic food supply because of limited foreign exchange availability.

In this study, two main food gaps are used to measure food insecurity: the status quo gap and the nutrition gap. The status quo gap is the difference between projected food supplies and base period (1995-97 average) per capita consumption. The nutrition gap is the difference between projected food supplies and the food needed to support minimum per capita nutritional standards. The requirements stemming from unequal food distribution among income levels are measured through the distribution gap. The food gap to maintain per capita consumption—status quo—at the base level for the 66 countries is estimated at 11 million tons for 1998 and is projected to be 18.8 million tons in 2008. Many countries that cannot maintain their per capita consumption are also consuming below their nutritional targets. The food supplies needed to meet their minimum nutritional requirements are projected to rise from less than 18 million tons in 1998 to more than 28 million in 2008.

Sub-Saharan Africa is the most vulnerable region with respect to food security. The region's per capita consumption is projected to decline 0.5 percent per year through the next decade. By 2008, Sub-Saharan Africa is projected to account for 61 percent of the total (all 66 countries) gap to maintain consumption and 79 percent of the nutritional gap even though the region's population constitutes only 25 percent of the total for the 66 countries. The main problem in the Sub-Saharan region is high population growth, which puts pressure on food supplies. While the region's production growth during 1980-97 exceeded that in Asia and Latin America, its population growth was also higher.

The Asian countries included in this study, despite having the second largest food gap, have made significant gains in increasing food availability over the past three decades. The ratio of food gaps to total consumption is very small (1-2 percent) and is projected to remain relatively constant for the next decade. The region, which will account for 63 percent of the population of all 66 countries in 2008, is projected to account for only 29 percent of the status quo food gap and 16.5 percent of the nutritional gap.

In Latin America and the Caribbean, the most difficult dimension of food security is the distribution of food within each country. Highly skewed distribution of income limits purchasing power and access to food for low-income households which, in turn, intensifies food security problems. As a result, 40 percent of the region's population is projected to be undernourished in 2008.

North Africa is the only study region with food supplies adequate to meet its nutritional needs.

Food consumption in the New Independent States (NIS, part of the former Soviet Union) is projected to increase because of economic recovery, improved export performance, and higher food production. This region is projected to

achieve the largest gains in per capita consumption—roughly 1 percent per year. Only the war-torn economy of Tajikistan, projected to have a significant food gap on a consistent basis, will likely remain vulnerable to food insecurity.

Among the factors contributing to food insecurity, the most crucial component is the performance of the food production sector. Domestic food production contributes to more than 90 percent of consumption in the most food-insecure countries. During the last decade, domestic production contributed 97 and 91 percent of consumption in the two lowest income groups in Asia and Sub-Saharan Africa. In North Africa, Latin America, and the NIS, domestic production contributed 50-60 percent. The volume of food production, in addition to its direct impact on consumption, has a strong link to population growth. Improvements in technology reduce the traditional reliance on human labor and affect human fertility decisions.

Although the main factors influencing food security are domestic food production, foreign exchange availability for food imports, and population growth, distribution of purchasing power within each country also plays a part in determining food security. Lower income groups have larger nutritional gaps than wealthier people. The distribution gap, which measures the amount of food required to raise food consumption of each income group to the nutritional requirement, is projected to increase 36 percent between 1998 and 2008. The growth of this gap far surpasses the growth in the number of people becoming food insecure. In fact, the number of people failing to meet their nutritional requirement is projected to grow only 3 percent during the next decade, reaching 1.13 billion by 2008. This means distribution-related nutritional problems will not necessarily spread to countries that are unaffected today, but instead problems will grow in countries that already suffer from food insecurity. Food-insecurity problems will intensify in those more than they will spread to other countries.